

PARTIAL COVERAGE RESTORATIONS

- *DEFINITION*
- *INDICATIONS*
- *CONTRA INDICATIONS*
- *ADVANTAGES*
- *DISADVANTAGES*
- *TYPES*

What is partial coverage



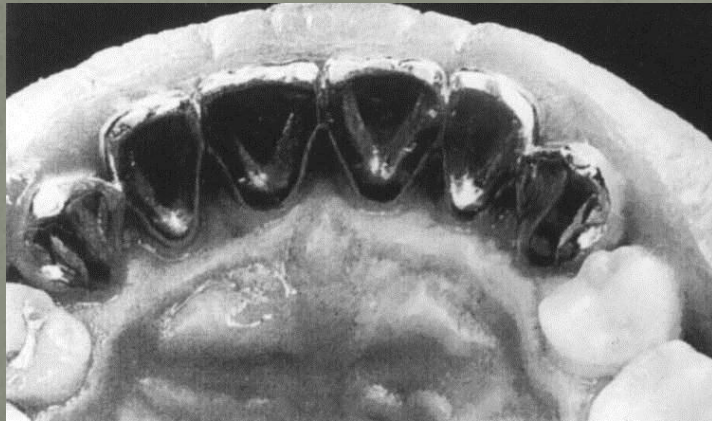
- ◎ Partial coverage restoration is an extra-coronal restoration that covers only part of the clinical crown.
- ◎ Partial veneer can be used as a single tooth restoration or it may serve as a retainer for short span fixed partial denture.
- ◎ Partial veneer can be used on both anterior and posterior teeth.

INDICATIONS

Partial veneer restoration is indicated as a single crown and as a bridge retainer in short span bridges in anterior and posterior teeth in cases of:

- 1-Good oral hygiene and low caries index.
- 2-Long normal, bulky mesiodistally and labiolingually abutment to accommodate the necessary retentive features.
- 3-Whenever esthetics is needed, and the buccal or labial wall is intact and well supported by sound tooth structure.
- 4-Splint retainers for perodontally involved anterior teeth.

Splint retainers for periodontally involved anterior teeth.



CONTRAINDICATIONS:

1. Teeth with short clinical crowns.
2. Thin teeth of restricted labio-lingual dimension.
3. Teeth that are proximally bulbous.
4. Poorly aligned tooth.
5. Bad oral hygiene and high caries index.
6. Retainers for long span bridges.
7. Endodontically treated teeth.
8. Malformed teeth.
9. Teeth with enamel hypoplasia and hypocalcification

ADVANTAGES:

- Conservative than the full veneer preparation
- Provide good esthetics.
- The margins are accessible for finishing and cleaning.
- Less restoration margin is in proximity to the gingival crevice, therefore lowering the possibility of periodontal irritation.

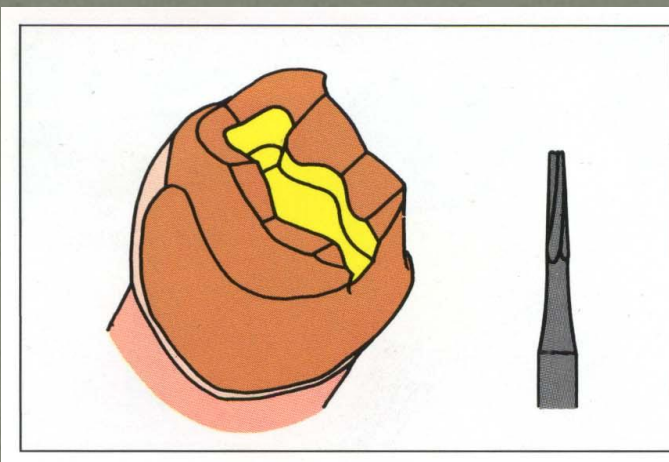


ADVANTAGES

- During cementation of a partial veneer restoration, the luting agent can escape more easily which produces relatively good seating of the restoration.
- Because of direct visibility, verification of seating and cement removal are simple.
- permits electric vitality testing.

DISADVANTAGES:

- Partial veneer restorations have less retention and resistance than full coverage restorations.
- Need great skill and experience of the dentist to prepare grooves and pins.
- Some metal is displayed in the restoration



TYPES OF PARTIAL COVERAGE RESTORATIONS



Anterior teeth

Three-quarter
restoration

Pin ledge
restoration

Laminate
veneer as a
single
restoration

Resin-bonded
restoration as a
bridge retainer

Mcboyl

Posterior teeth

Three-quarter
restoration

Severn-eighth
restoration.

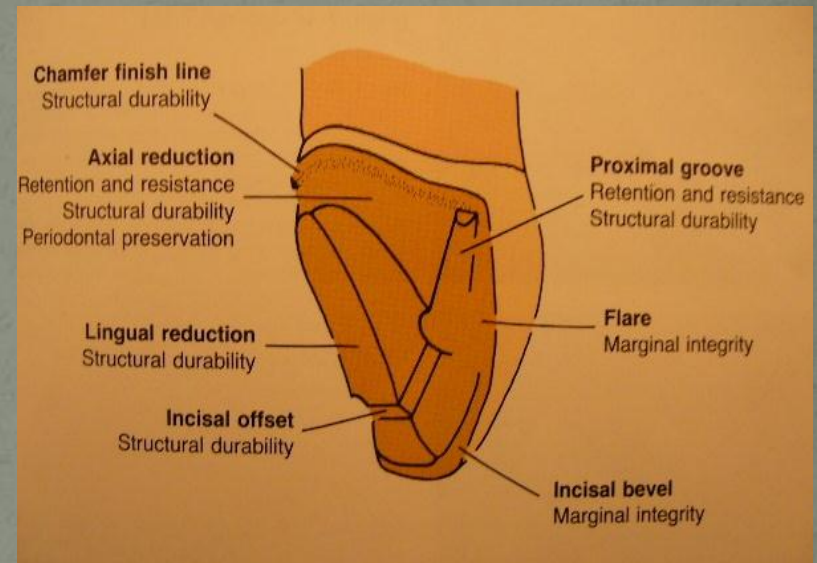
Resin-bonded
restoration as a
bridge retainer.

Reverse three-
quarter
restoration

Half-crown
restoration.

Three-Quarter Crown for anterior teeth

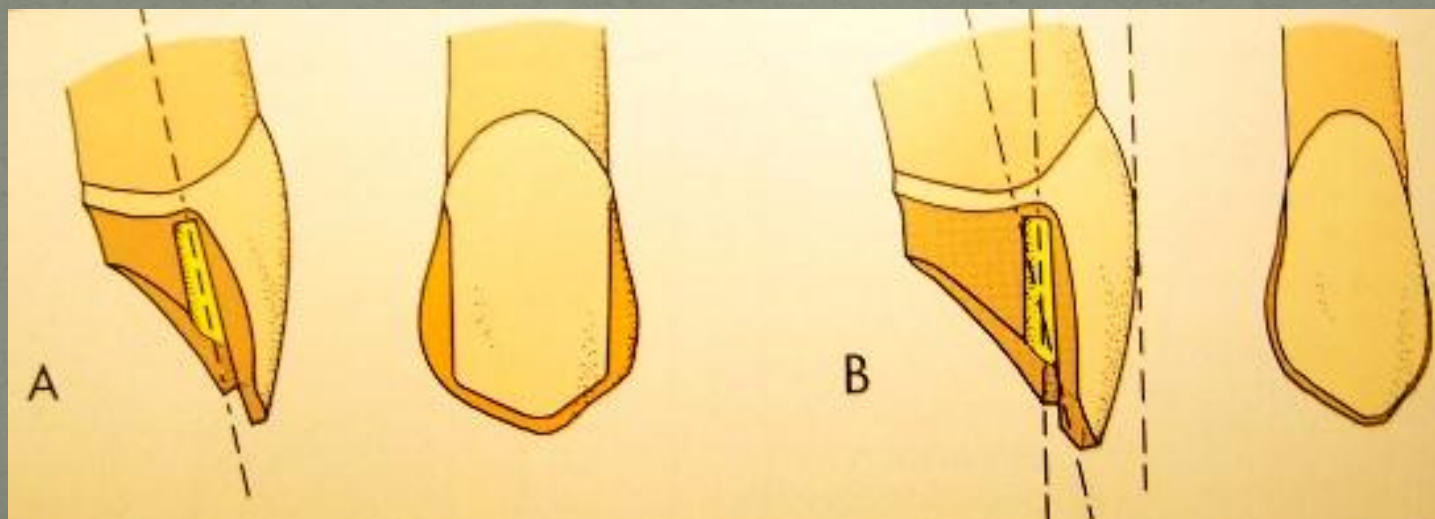
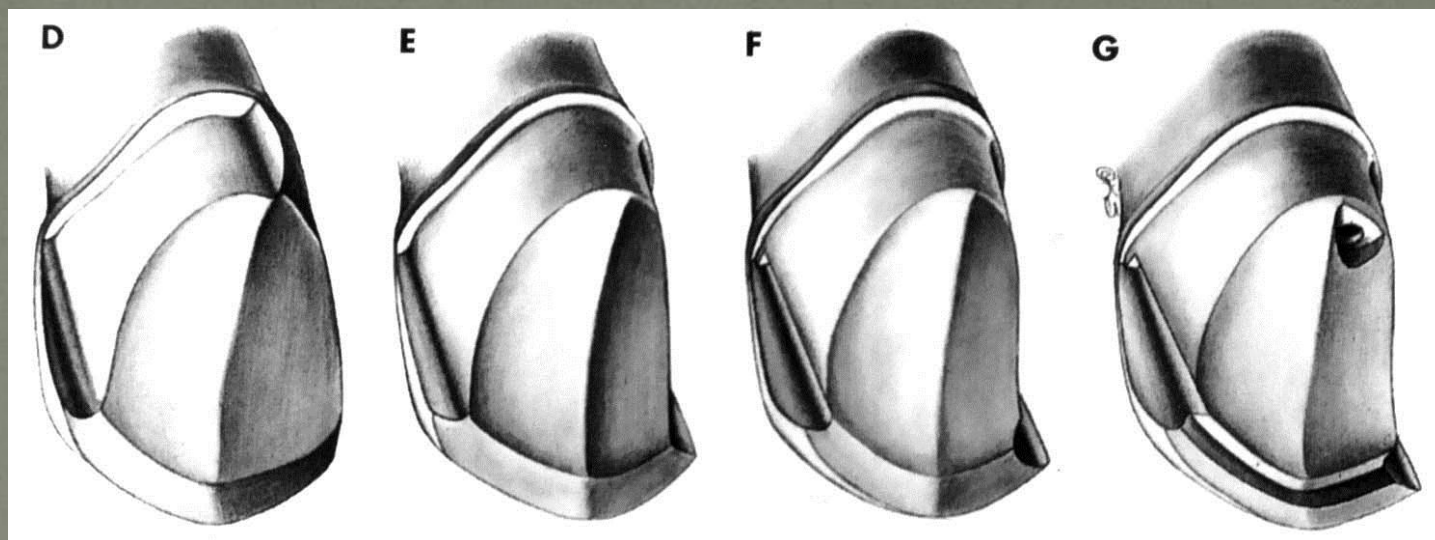
It is a partial coverage extra coronal cast restoration involving all tooth surfaces leaving the labial or buccal surface intact retained in position by grooves prepared on the proximal surfaces.



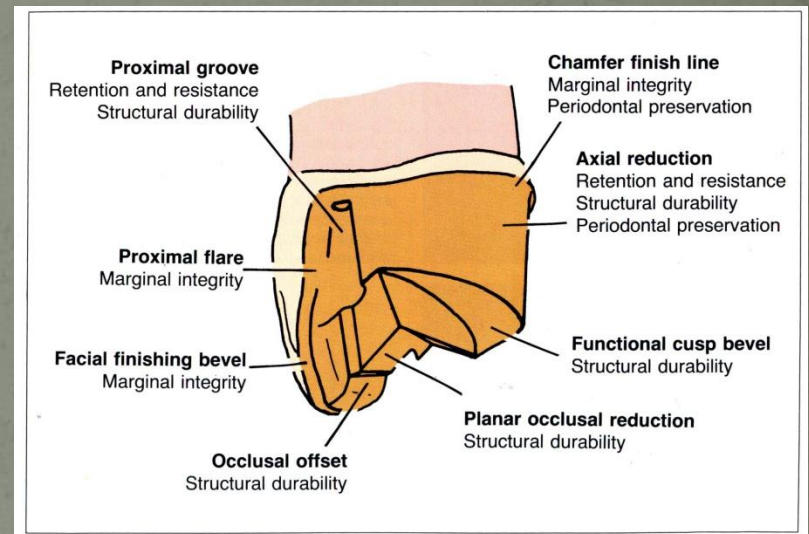
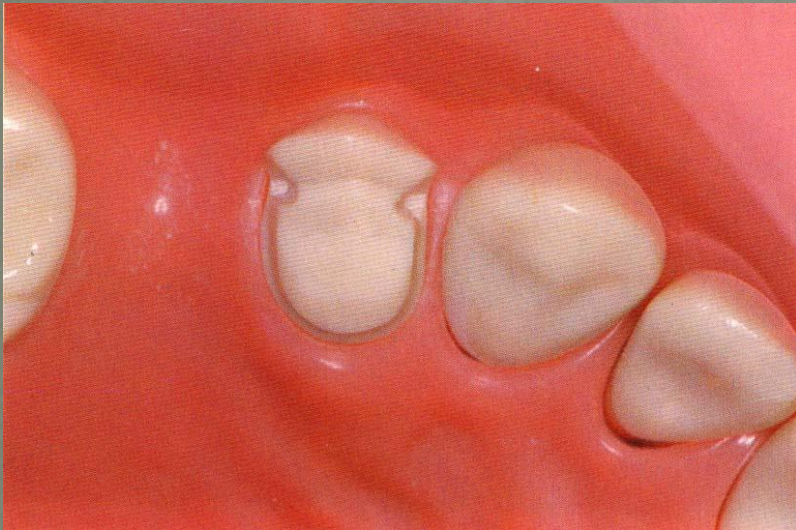
Anterior $\frac{3}{4}$ crown

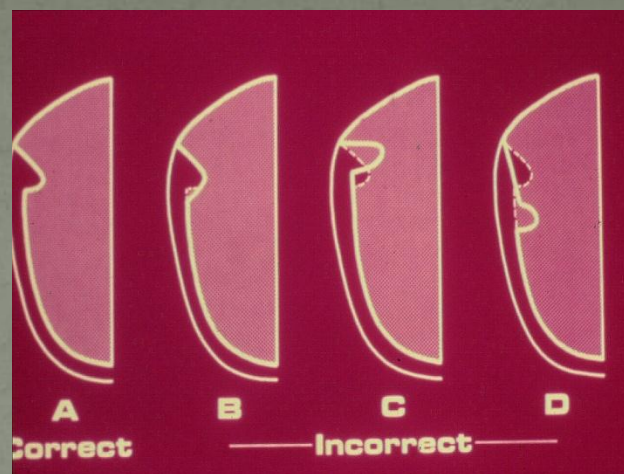
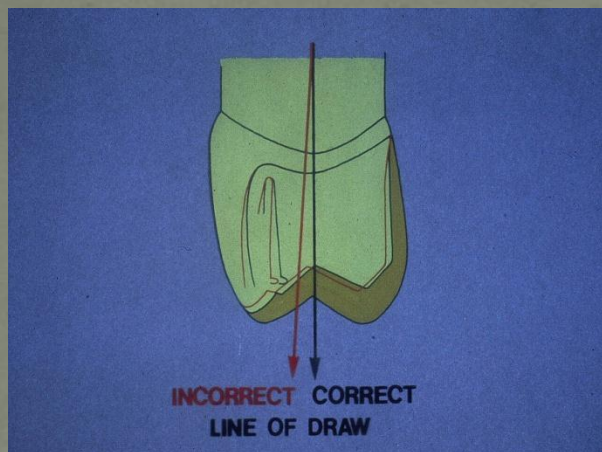
◎ To improve the retention and resistance forms of the preparations:

1. Cingulum groove.
2. Lingual pin hole.



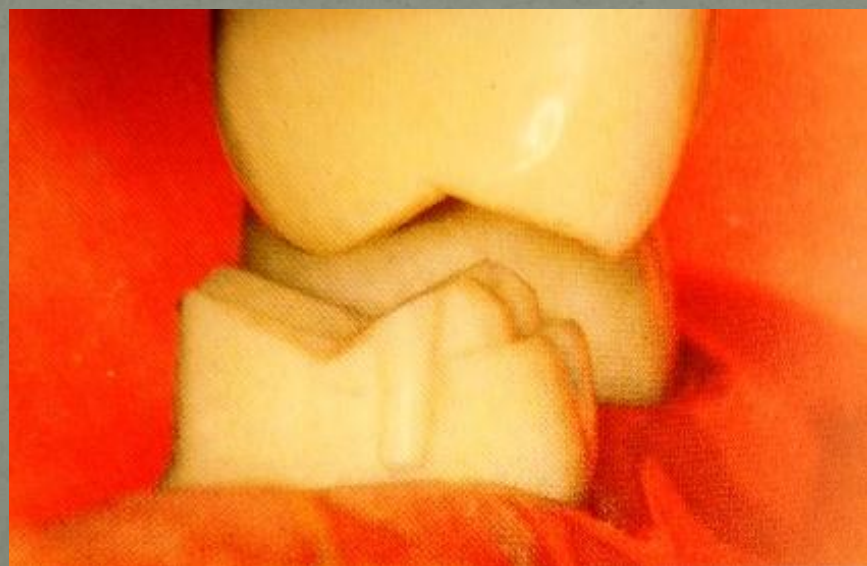
Maxillary posterior $\frac{3}{4}$ preparation

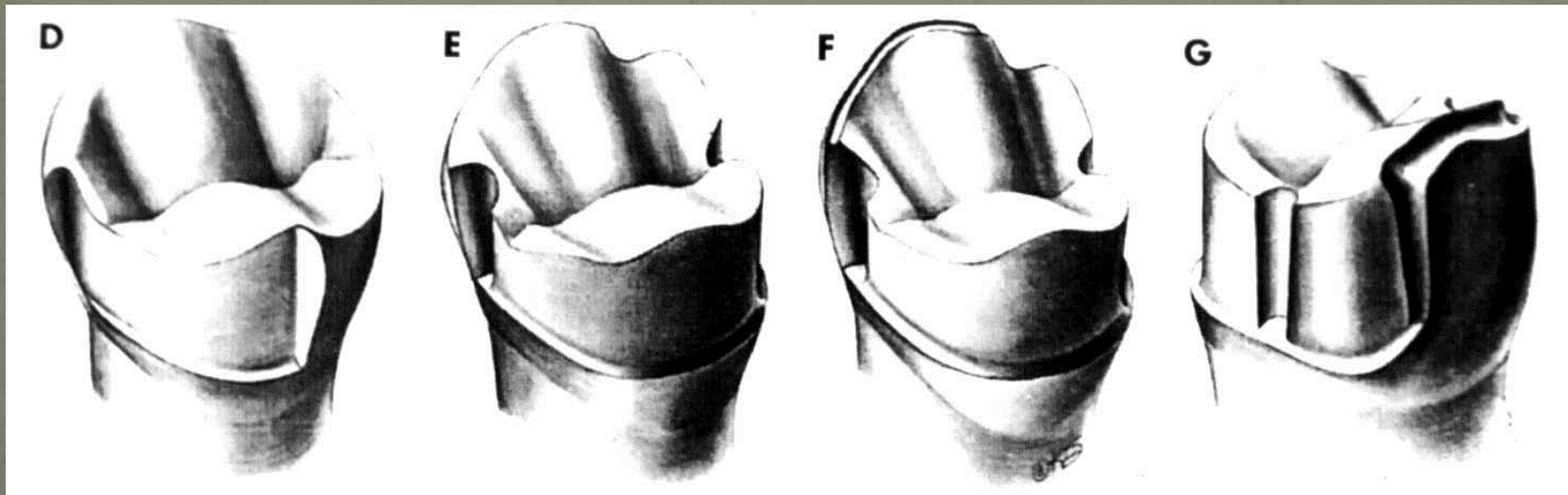
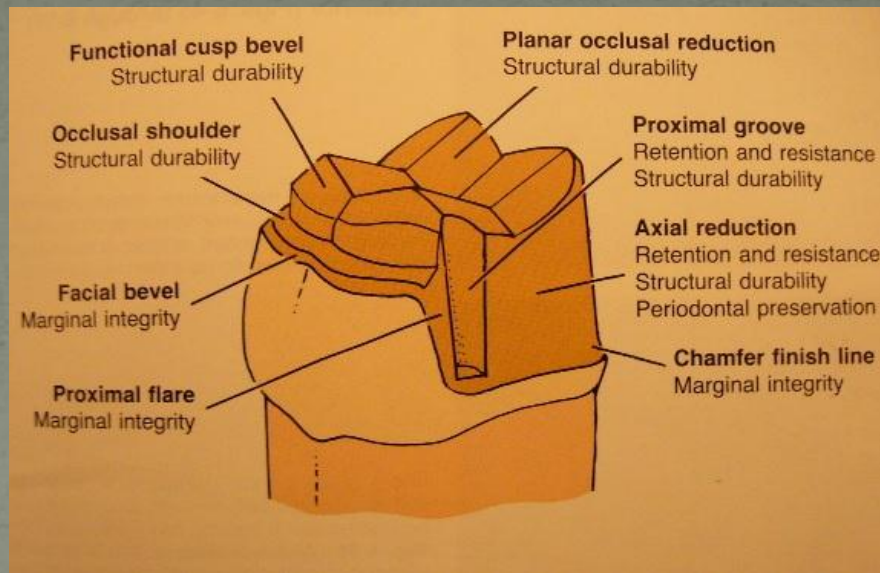




Mandibular posterior $\frac{3}{4}$ preparation

- Due to morphologic difference between maxillary and mandibular posterior teeth, they require altered preparation design.
- They differ from maxillary posterior $\frac{3}{4}$ preparations in two aspects:
 1. additional retention is required because of the shorter crown lengths of mandibular teeth.
 2. The axial surface that is not prepared (buccal) includes the functional cusp bevel.







*Reversed three
quarter crown*

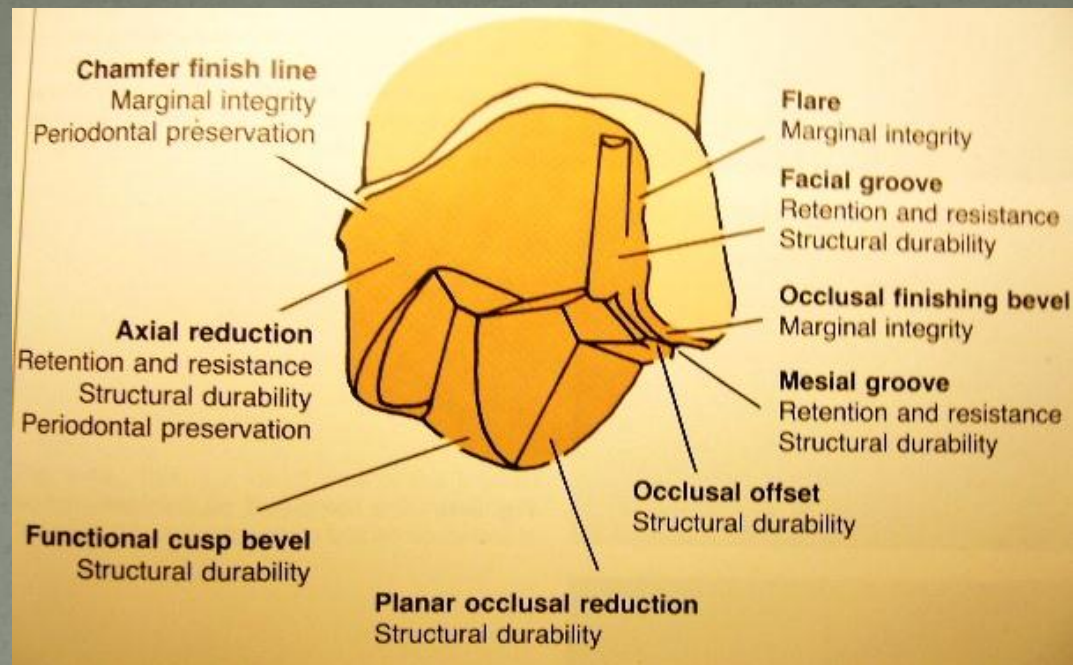
It is modified $\frac{3}{4}$ preparation where the lingual surface is left intact

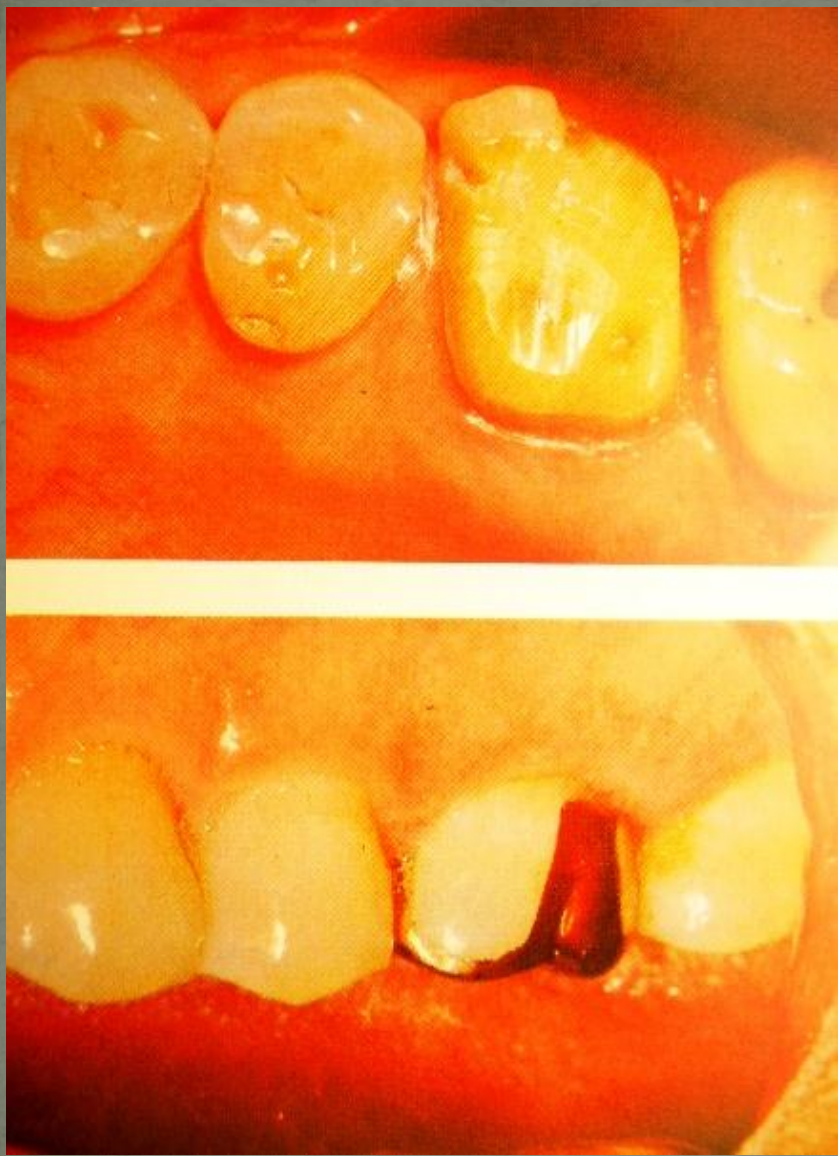
A tropical beach scene with palm trees on the left, a sandy beach in the foreground, and a blue body of water with a small island in the background under a blue sky with white clouds.

Maxillary molar 7/8 preparation

Seven-Eighths crowns

Are extension of the three quarter crown to include major portion of the facial surface, usually the disto-buccal cusp of the of maxillary molars.

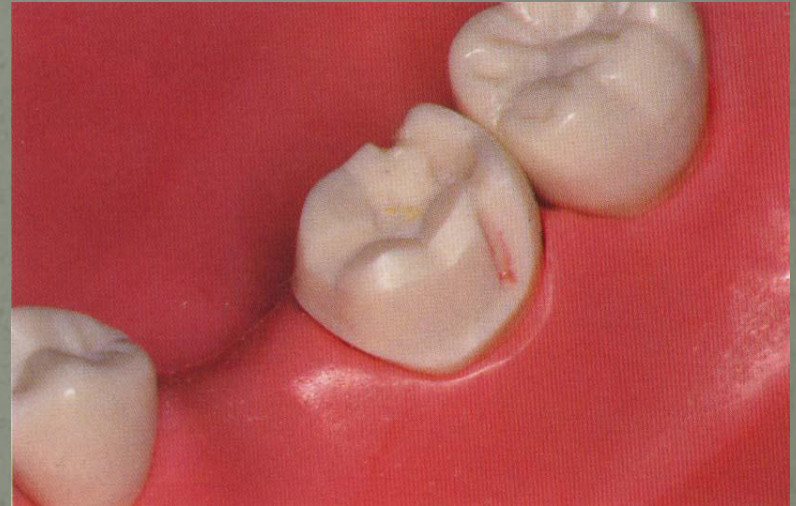
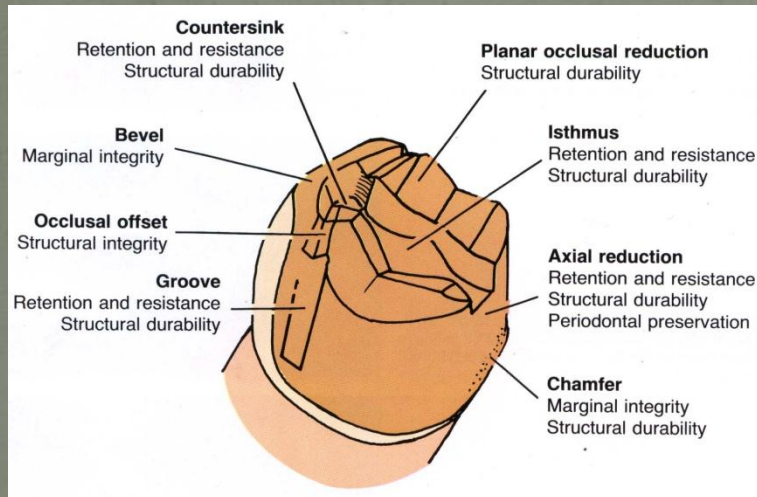




Half crown

it is a partial coverage cast restoration involving one proximal Surface, half buccal and half lingual and occlusal surfaces. Gains its Retention by buccal and lingual grooves

1/2 partial veneer preparation



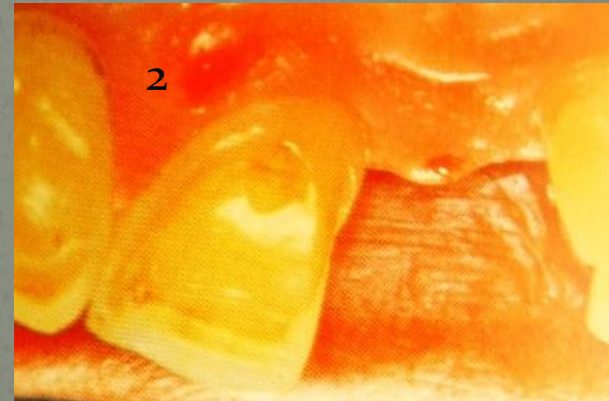


Pin ledge partial veneer preparation

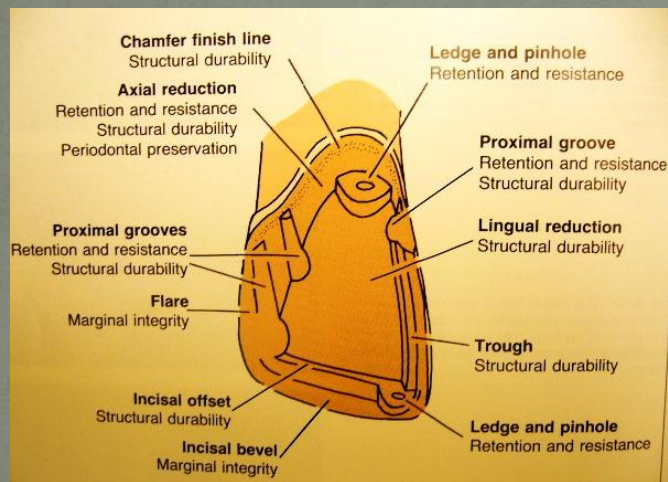
- Pin ledge restoration is a partial coverage restoration that covers lingual, one or both proximal surfaces and takes its retention from pins inserted in prepared pin holes in the palatal surface.

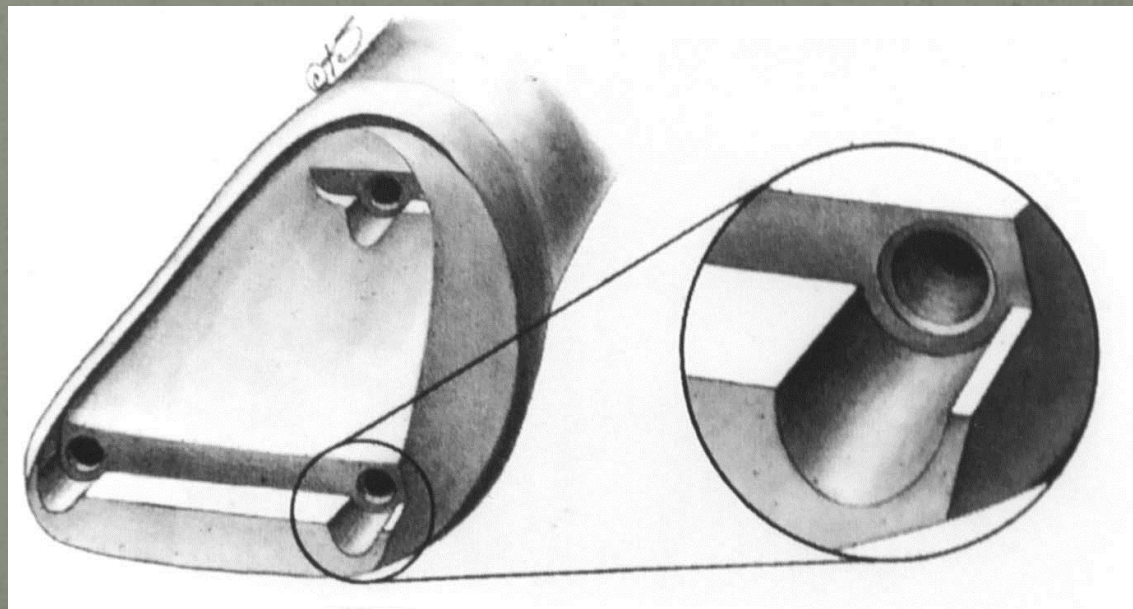
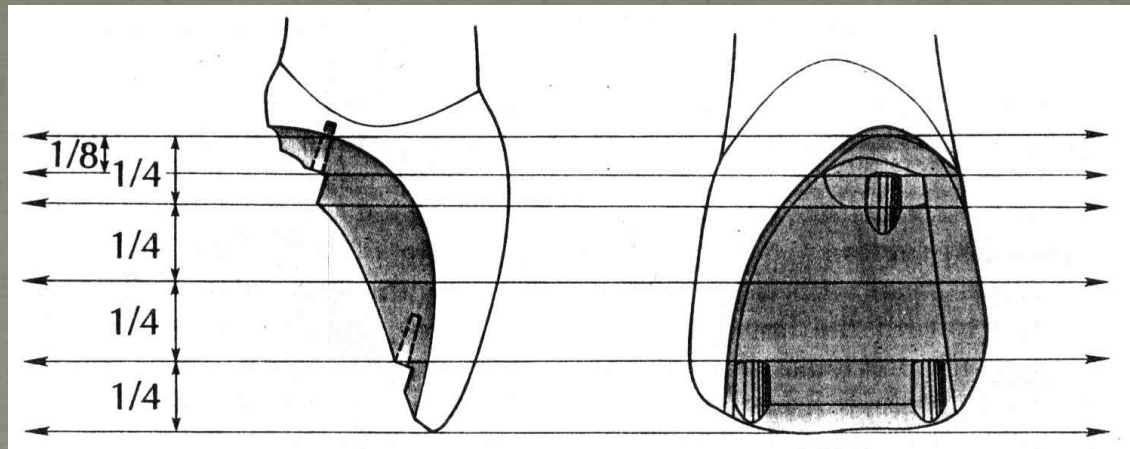
Designs of pin ledge preparations:

1. Conventional pin ledge design
2. Pin ledge with a proximal slice



3. Pin ledge with a proximal groove

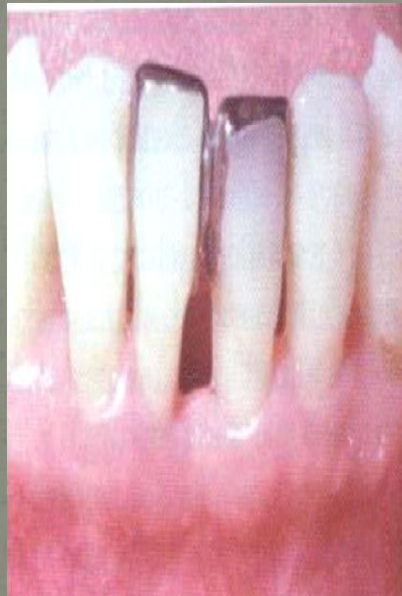






Mcboyle retainer

A modified $\frac{3}{4}$ crown gained its retention by grooves located at a labio-proximal line angles indicated in lower anterior teeth.



Laminates;

- Are veneer restorations that restore the facial surface of a tooth for esthetic purposes.
- They are fabricated from resin or dental porcelain.
- They bond to etched enamel with a composite resin luting agent.



Laminate Veneers

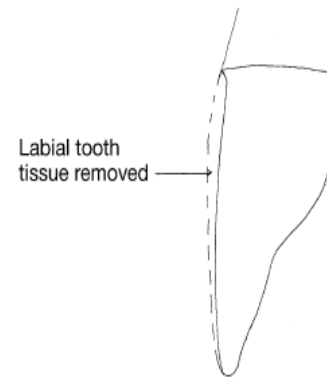
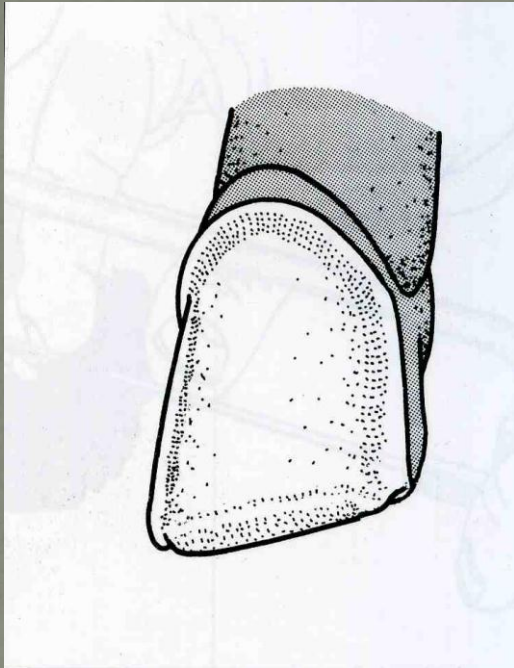


Fig. 10.14 Veneer preparation.





A photograph of a winter landscape. A large, dark silhouette of a tree with bare branches dominates the right side of the frame. In the upper left, a bright sun is visible, creating a warm, golden glow across the sky. The ground is covered in snow, with soft shadows cast by the tree and other distant trees. The overall scene is serene and cold.

**Resin retained fixed partial
denture**

Resin-bonded restorations

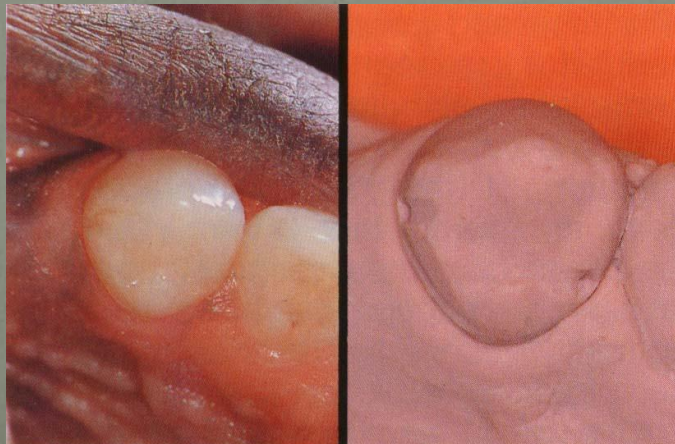
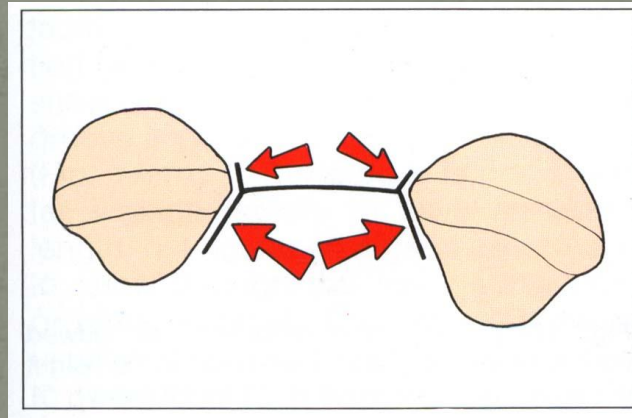
- Are cast metal partial veneers that are bonded to etched enamel.
- Resin-bonded restorations are used most often as retainers for a fixed partial dentures (FPD) .
- This type of prosthesis is commonly referred to as a maryland bridge.



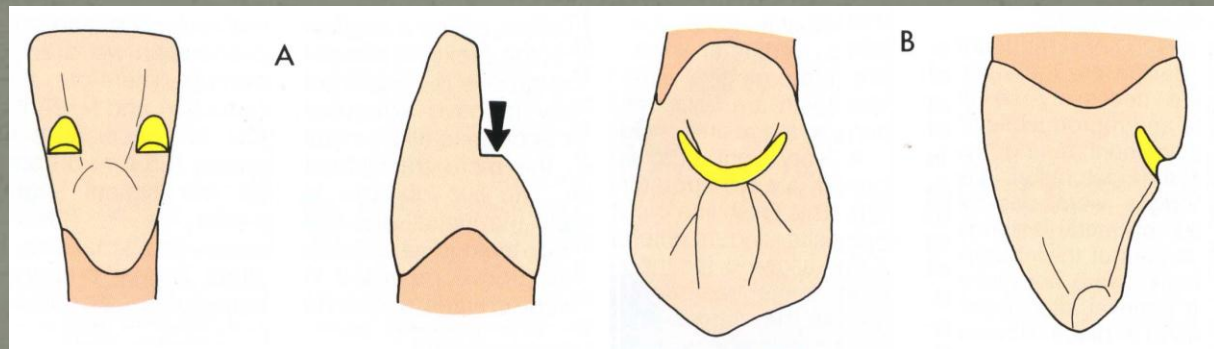
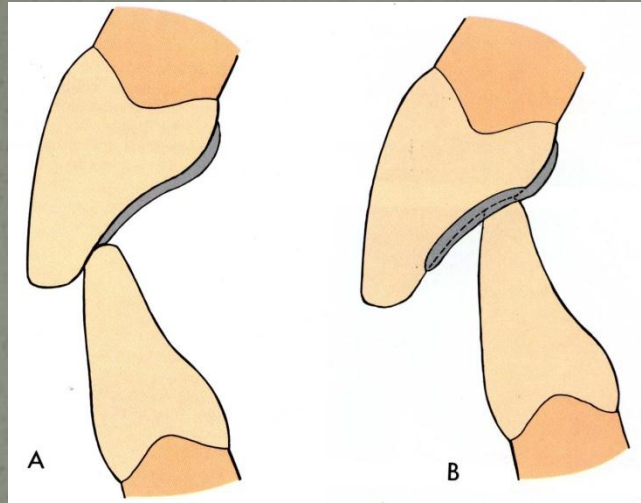
Resin retained fixed partial denture

Anterior preparation design.

1. Proximal reduction.
2. Lingual reduction
3. Vertical stops:



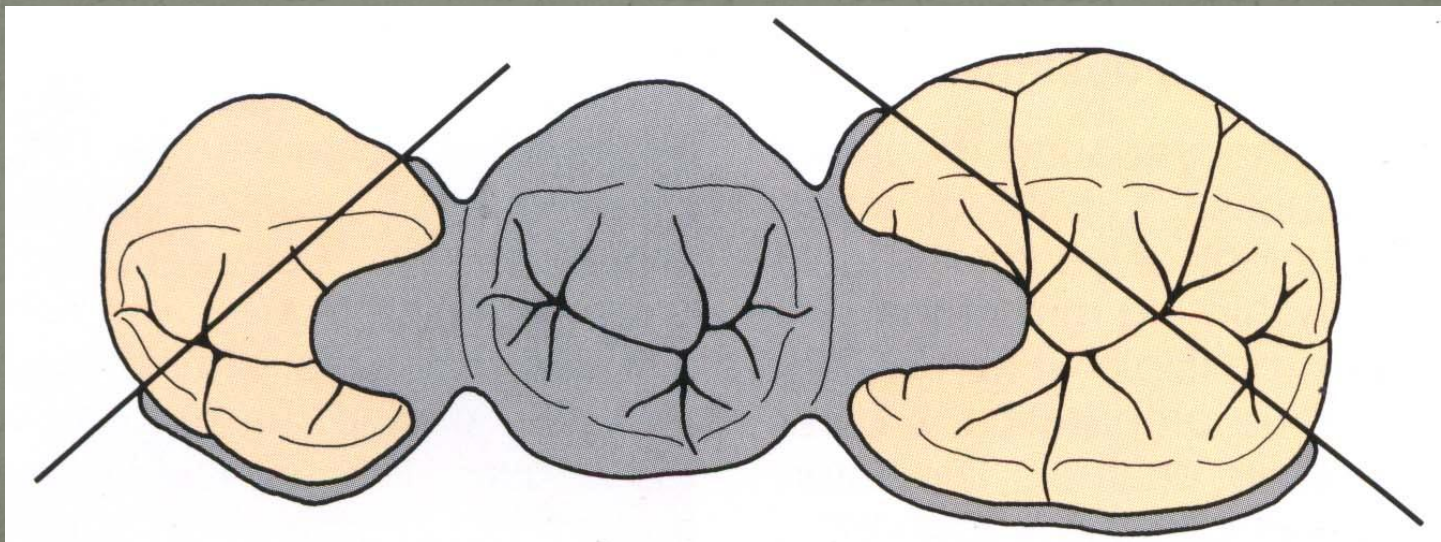
4. Finish line:
- ⦿ A very light chamfer finish line is placed supragingivally. The finish line on the proximal surface adjacent to the edentulous span should be placed as far facially as possible.
 - ⦿ The finish line can be carried to the opposite lingual inter-proximal embrasure allowing for maximum extension of the framework.



◎ **Posterior preparation design:**

The basic framework for the posterior resin retained fixed partial denture consists of:

1. Occlusal rest for resistance to gingival displacement.
2. Proximal wrap and proximal slots for resistance to torquing forces.

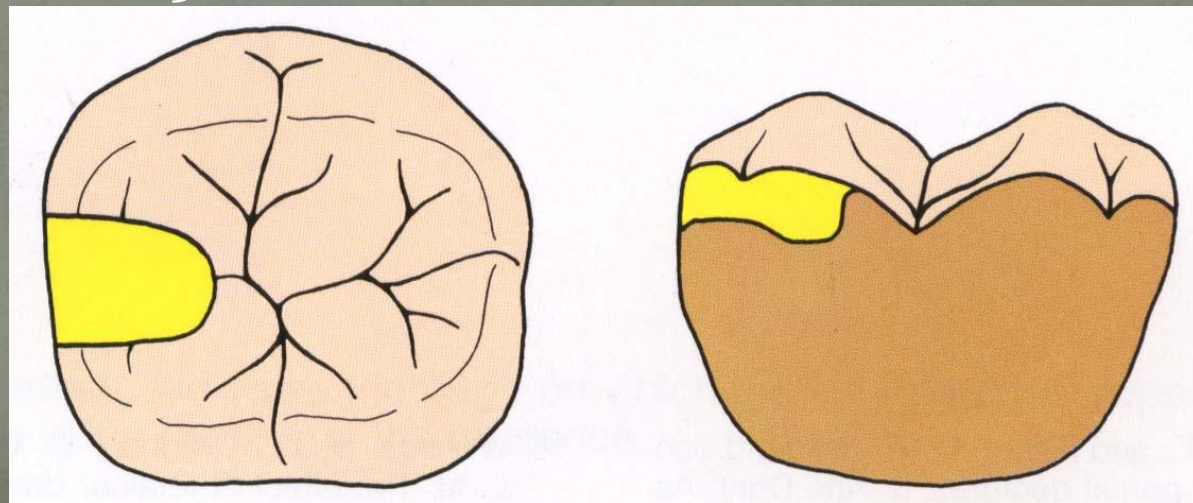


- ◎ The grooves on the proximal and lingual surfaces of the abutment teeth serve two main functions:
 1. To define the path of insertion.
 2. To provide retention and resistance forms to the retainer against the dislodging acting on the pontic.



A spoon shaped occlusal rest seat is placed in the proximal marginal ridge area of the abutments adjacent to the edentulous space.

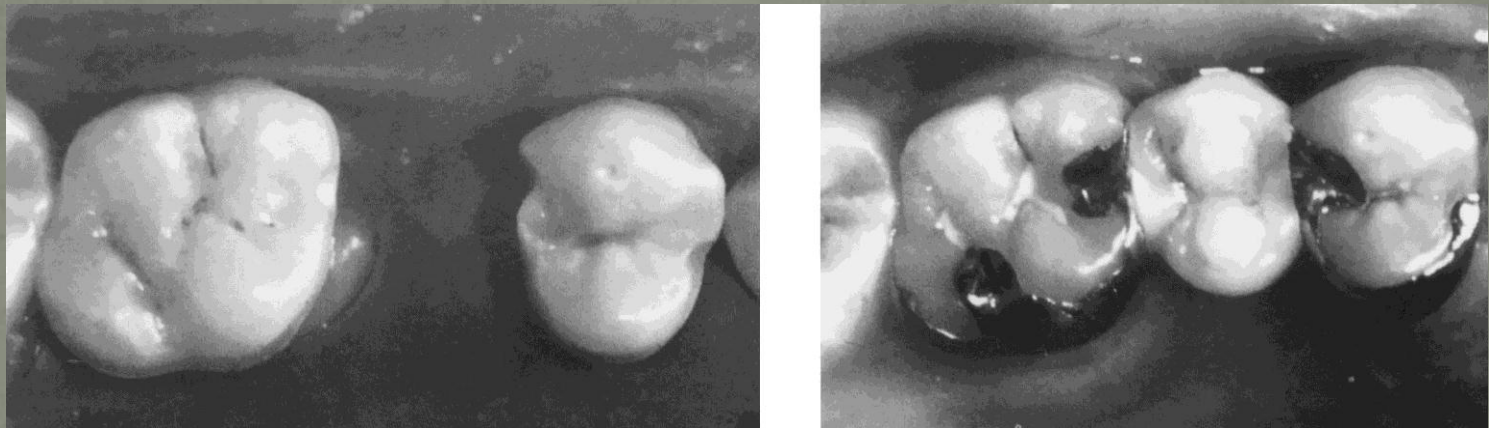
- The facio-lingual dimension should be 1.5-2 mm.
- The mesio-distal dimension should be 1.5-2 mm.
- The depth is 1-1.5 mm.



Differences in preparation between maxillary and mandibular posterior teeth:

1. The lingual wall of the mandibular tooth is prepared in a single plane, while the lingual surface of the maxillary molars requires two plane reduction.
2. Mandibular lingual retainer may be carried over the lingual cusps to augment resistance and retention form on short clinical crown of lingually inclined molars.

- A wide range of extension of the casting on to the occlusal surfaces of posterior teeth is possible:
 1. Encircling of the cusps.



2. Covering of the cusps.



- *Definition*
- *Indications*
- *Contra indications*
- *Advantages*
- *Disadvantages*
- *Types*

A photograph of a tropical sunset. The sky is a deep orange, with the sun low on the horizon. Two palm trees are silhouetted against the bright light on the left. The foreground shows a rocky coastline with waves crashing against the shore. The text "Thank you" is written in a yellow, italicized font across the middle of the image.

Thank you